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AUTHOR DeMarte, Patrick J.; Sorgman, Margo I.
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ABSTRACT

The lack of empirical data on teacher self-perception led to this study of the effects of selected courses in humanistic education on the self-perceptions of preservice teachers. Changes in self perception of students in three courses -- Values Clarification, Discovering Your Teaching Self, and Transactional Analysis -- and differences in those taking these courses and student teachers who did not were assessed by a seven point semantic differential rating scale. Factor analysis and factor similarity provided data shown in tabular form for each of the concepts of Real Self, Ideal Self, and Teaching Self. Results for those in humanistic education courses showed that Real Self perceptions were lower in self-esteem and a sense of personal well-being but Ideal Self was viewed more positively in terms of capability, intelligence and leadership. Students completing the courses perceived their Teaching Self as better adjusted to its environment and more capable of doing something about it. A summary of questions evolving from the findings and recommendations for further investigation conclude the report. (Author/KSM)

A PILOT STUDY TO INVESTIGATE THE EFFECTS OF COURSES IN HUMANISTIC EDUCATION ON THE SELF-PERCEPTIONS OF PRESERVICE TEACHERS

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Patrick J. DeMarte and Margo I. Sorgman

State University College at Geneseo

Geneseo, New York

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RATIONALE

The answer to the question of what constitutes teacher effectiveness is still being debated, yet one dimension which has been identified is that of teacher self-perceptions. These perceptions have been found to influence the teacher's perceptions of others, students' self-perceptions, and the teachers' classroom behaviors.

The phenomenological approach to teacher effectiveness, as advocated by Combs (1965) and Rogers (1965), suggests that perceptions are the most critical variable in effective teaching. Combs states that "whether an individual will be an effective teacher depends upon the nature of his private world of perceptions," [p.19] and concludes that good teachers are those who typically see themselves as sociable, trustworthy, wanted, and valuable.

Teachers with psychologically sound self-other perceptions tend to demonstrate more facilitative behaviors than those who have unhealthy perceptions. Dieken and Fox (1973) reported congruence between the teachers' perceived verbal styles and their classroom behaviors. Other facilitative behaviors such as consideration, understanding, and friendship were found to have a positive influence on students' interests in science (Reed, 1962), while warmth and considerateness inspired more creative poetry (Cogan, 1958), as well as an improvement in vocabulary and arithmetic achievement (Christensen, 1960). Spaulding's findings (1963) indicate that socially integrative and learner supportive behaviors of teachers result in improved student self-concepts, yet Schultz and Wolf (1973) suggest that teachers tend to exhibit minimal levels of this facilitative behavior.

Another effect of teacher perceptions was documented in the landmark study by Rosenthal and Jacobson (1968), in which they reported that a teacher's perceptions not only effect student self-perceptions, but also effect academic achievement. In his assessment of self-concept and school achievement, Purkey (1973) summarizes the full educational implications of perceptions and teacher effectiveness. He states:

> "The key to building positive and realistic self-images in students lies largely in what the teacher believes about himself and his students. These beliefs not only determine the teacher's behaviors, but are transmitted to the students and influence their performance as well." [pp.259-260]

While evidence would indicate that perceptions are determinants of teacher behavior, it has also been reported that these perceptions can be modified via a self-study approach to teacher-training (Combs, 1969; Fuller, 1967). Calliotte (1970) and Weismann et al. (1971) both report the efficacy of humanistic experiences in inducing perceptual changes, with the result that sensitivity was enhanced, facilitative communication increased, perceptions became more accurate, and the desire for warm, meaningful relationships was heightened. Similarly, Curwin (1972) and Fuhrmann(1972) observed that more positive real and ideal self-perceptions resulted from humanistic experiences in values clarification and the perceptual methods used to assess intern-teaching performance.

Healthy self-perceptions have also been found to influence more cooperative leadership patterns (Kwal and Fleshler, 1973). Related to this notion of leadership is the teacher's sense of power, which Moeller and Charters (1965-1966) suggest is dependent upon the influence teachers perceive they have on others.

In summary, a review of the literature suggests that teacher self-perceptions are a critical variable in teacher effectiveness and that these perceptions must be a concern of teacher education programs (Dumas, 1969; Jansen, 1971; Hamachek, 1969). Although this self-study approach to teacher-training has been found effective in modifying self-perceptions, there is a general lack of empirical data on the effects of courses in humanistic education on these self-perceptions. This has led the investigators to undertake this study, with the hope that it can make a significant contribution to that body of knowledge concerned with assessing the effects of selected courses in humanistic education on the self-perceptions of prospective teachers.

PROBLEM

The major problem investigated in this study was to determine the effects of courses in humanistic education on the self-perceptions of preservice teachers.

Subproblems investigated are as follows:

A. To determine changes in self-perceptions of preservice teachers as the result of the experiences in courses in humanistic education, specifically: Values Clarification, Discovering Your Teaching Self, and Transactional Analysis.

B. To determine differences in self-perceptions of preservice teachers who have had at least one course in humanistic education and preservice teachers and other college students who have not had courses in humanistic education.

DEFINITION OF TERMS

Humanistic Education - approaches to affective learning that assign to the emotional factor in education a role as important as traditional substantive content and skills. Humanistic education, as used in this study, included courses in Values Clarification, Discovering Your Teaching Self, and Transactional Analysis.

Self-perceptions - are thoughts a person has in reference to his personal appearance, abilities, and actions. Operationally defined for this study, self-perceptions are the characterizations of responses made on semantic scales in reference to

specific concepts about the self.

Discovering Your Teaching Self - a course in humanistic education which assists prospective teachers in setting their educational goals and in developing methods of self-assessment through data collection and data analysis.

Value Clarification - a course in humanistic education which assists prospective teachers in the discovery and clarification of their value positions and in development of affective curriculum for elementary and secondary schools.

Transactional Analysis - is a specific theory of personality and group dynamics developed by Eric Berne, which analyzes people in terms of their life-scripts. This analysis of life-scripts includes determination of one's ego states, transactions, and games

METHOD

Subjects

Students enrolled in three courses in humanistic education, Values Clarification, Discovering Your Teaching Self, and Transactional Analysis together form one experimental group (N=72). Ten courses were randomly selected from the regular offerings in the Spring 1973 catalog for SUC Geneseo to serve as one reference population. All ten instructors of the courses selected agreed to participate in the study. Two instructors forgot to give the posttest and were dropped from the group. The resulting population contained 94 subjects. A second reference population was obtained by random selection of 70 students who were involved in student teaching. None of the students in eitner

reference population was enrolled or had previously taken courses in humanistic education.

Instrument

The instrument used to assess the variable self-perceptions is a semantic differential. Seven point semantic differential scales were used to rate the concepts: Myself as I really am most of the time - referred to in this paper as Real Self and designated RS, Myself as I really want to be - referred to as Ideal Self and designated IS, and Myself as a teacher - referred to as Teaching Self and designated TS, on 21 polar adjective pairs. The pairs (administered as indicated in Table E) were developed by Lewis (1971) and used by Monge (1973) in a study of self concept. The concepts for the instrument were selected by the investigators and accepted on the grounds that there was a direct relationship between the objectives for the courses in humanistic education and the concepts.

Design

The major questions asked in this study are:

1. Can courses in humanistic education; specifically, Values Clarification, Discovering Your Teaching Self, and Transaction Analysis, effect changes in preservice teachers' self-perceptions?
2. Are there differences in self-perceptions of preservice teachers who have had at least one course in humanistic education and a randomly selected sample of college students at the same educational level?
3. Are there differences in self-perceptions of preservice teachers who have had at least one course in humanistic edu-

cation and preservice teachers who have completed their preparation for teaching through student teaching but have had no courses in humanistic education?

Two designs were used to answer these questions. A pretest-posttest control group design was used to answer questions 1 and 2, while a posttest only technique was used to answer question 3. Using the notation of Campbell and Stanley (1963) these designs may be represented as follows:

Pretest-Posttest Control Group

R^*_1	O_1	X_1	O_3
R_2	O_2		O_4

Where: Represents random selection of a sample from a population.

R* indicates intact groups. (The use of intact classrooms for these groups was necessary since it was impossible to select these classrooms at random when the treatment will be the course taught in these classrooms.)

O_1, O_2 indicate the administration of pretest measures

O_3 O_4 indicate the administration of posttest measures

X_1 indicates the experimental treatment - in this case a course in humanistic education.

Posttest Only

R^*_1	X_1	O_1
R_2		O_2

Where: R represents random selection of a sample from a population.

R* indicates intact group

O_1 and O_2 indicate the administration of the posttest measure

X_1 indicates the experimental treatment - a course in humanistic education

Results of each experiment will be presented separately.

RESULTS

General Procedures

Factor Analysis:

Principal components were extracted as the first step in each analysis. Vectors with eigen values greater than or equal to one were then rotated to the verimax criterion (Kaiser, 1959). Orthogonal verimax rotation was selected on the basis of Smith's (1962) findings that this method "provided the most satisfactory factor structure for interpretation (p. 333)."

Rotated components are referred to in this paper as factors.

Factor Similarity:

The degree of factor similarity was determined by means of the coefficient of congruence devised by Tucker (1951) and reported in Harmon (1967, p. 270). Significant factor similarity exists, according to Tucker (1951), when the coefficient of congruence is greater than .459 or less than -.459. Factor similarity between groups is desirable in order to pool the groups for statistical comparison.

ANALYSIS #1: Pretest Posttest Control Group Design

Results reported here were obtained in an attempt to answer the first two questions on page 6. The first question refers to changes in self-perceptions as effected by courses in humanistic education. The following are results pertaining to this question.

A separate factor analysis was performed on the experimental group's pre and posttest scores for each concept, Real Self and Ideal

Self. This resulted in four independent factor analyses.

Concept #1: Myself as I really am, most of the time. (Real Self) Factor Similarity

Four factors with eigen values greater than one were extracted from both pre and posttest data for this concept. Coefficients of congruence were determined and are reported in Table A below.

TABLE A

COEFFICIENT OF CONGRUENCE MATRIX FOR HUMANISTIC EDUCATION GROUP PRE VS POST RS

POSTTEST FACTORS	PRETEST FACTORS 1	2	3	4
1	.569*	.160	.454	.163
2	-.198	-.418	.425	-.598*
3	.317	-.020	.202	.114
4	.506*	-.075	-.306	-.293

*factor similarity Tucker (1951)

It is obvious that a high degree of factor similarity does not exist between the pre and post factors for this group on this concept. This being the case, looking furtner into this question is unwarranted. It does, however, pose a very interesting question; what is the source and nature of this dissimilarity. This question was not pursued immediately but will be the first question to be investigated after the major questions in this study have been resolved.

Concept #2: Myself as I really want to be, most of the time.

(Ideal Self) Factor Similarity

Seven factors with eigen values greater than one were extracted from pretest and five from posttest data. Coefficients of congruence were determined and are presented in Table B.

TABLE B

COEFFICIENT OF CONGRUENCE MATRIX FOR HUMANISTIC EDUCATION GROUP PRE VS POST IS

POSTTEST FACTORS	PRETEST FACTORS 1	2	3	4	5	6	7
1	.443	.072	.022	.085	-.505	.230	-.216
2	.0533	-.608*	.036	.584*	-.551*	.633	-.411
3	-.115	-.103	-.687	.271	-.257	.601	-.240
4	.771*	-.264	.087	.237	-.415	.654*	-.361
5	-.188	.134	.195	-.278	.116	-.255	.461

*factor similarity, Tucker (1951)

Here again, as for the concept real self, a high degree of factor similarity is not evident. Factors three and seven of the pretest were not similar to any factors in the posttest, hence, further investigation into this question is at best questionable and was not pursued. Further investigation into the nature of this dissimilarity is necessary and will be done as an offshoot of this investigation.

The second major question under investigation asks: are there differences in the self-perceptions of preservice teachers who have had at least one course in humanistic education and randomly selected sample of college students at the same educational level? The following are results of the attempt to answer this question.

The randomly selected sample of college students is referred to in this paper as the Liberal Arts group and is abbreviated LA. Separate factor analyses were performed on the Liberal Arts group and Humanistic Education (HE) group's pretest data for the purposes of determining factor similarity. One pooled factor analysis was performed on pre and posttest data of both groups for the purpose of determining differences in self-perceptions between these two groups. The results of these operations are presented first, followed by the test of the hypothesis to determine the nature of differences between groups.

Concept #1: Myself as I really am, most of the time. (Real Self) Factor Similarity

Five orthogonal factors were extracted for the Humanistic Education group and three for the Liberal Arts group. Coefficients of congruence were determined for these factors and are presented in Table C.

TABLE C

COEFFICIENT OF CONGRUENCE MATRIX FOR HE AND LA REAL SELF						
Factor for the Humanistic Education Group		1	2	3	4	5
Factor for the Liberal Arts Group	1	-.957*	.304	-.199	.595*	-.708*
"	2	.128	-.770*	.562*	-.246	.218
"	3	-.471	.189	-.023	-.208	-.557*

The factor structure is such that Factors 1 and 2 for HE are congruent to Factors 1 and 2 for LA. Factor 3 of HE is congruent to Factor 2 of LA. Factor 4 of HE is congruent to Factor 1 of LA. Factor 5 of HE is congruent to Factors 1 and 3 of LA. This represents a reasonable degree of factor similarity, certainly enough to justify pooling the groups for comparison.

Pooled Verimax Analysis

Four orthogonal factors were extracted from the pooled data. The 21 adjective pairs were listed under the factors in which they loaded heaviest in order to name the factors. Table D presents the factors with the adjectives used to name the factor. The pairs of adjectives are listed in order of their loadings, largest to smallest.

TABLE D

FACTORS FOR REAL SELF HE AND LA

I. Adjustment	II. Leadership/Achievement
Satisfied-Dissatisfied	Leader-Follower
Relaxed-Nervous	Success-Failure
Smart-Dumb	Stable-Unstable
Friendly-Unfriendly	Superior-Inferior
Refreshed-Tired	
Kind-Cruel	IV. Value/Well-being
III. Masculinity/Feminity	Confident-Unsure
	Strong-Weak
Hard-Soft	Good-Bad
Rugged-Delicate	Steady-Shaky
	Nice-Awful
	Sharp-Dull
	Healthy-Sick
	Valuable-Worthless
	Happy-Sad

Since the same instrument was used by Monge (1973), the findings of Monge (1973) were used as a primary reference for naming the factors in this study. For Factor I, Adjustment, the positive adjectives relaxed, refreshed, and satisfied were key elements of Monge's Factor III which he named Adjustment. Monge describes responses to this factor as the following:

> "The positive pole conveys a picture of need satisfaction and homeostatic balance versus an image at the negative pole of helpless frustration. The person who has attained a comfortable balance with his environment, adjusted to its rhythms of ebb and flow, and built a comfortable niche in life, would apply the positive adjectives to himself." [p.387]

He goes on to relate this definition of adjustment to Kuhlen's (1959) definition of adjustment as "the degree to which an organism is in a state of equilibrium not only with itself but also its interaction

with the environment."

The fact that friendly and kind were additional elements of our Factor I, may be indicative of a particular facet of adjustment such as social adjustment. This is only conjecture and hence, the name Adjustment was retained for this factor.

Factor II, Leadership/Achievement, contained the adjectives success, leader, and superior common with Monge's (1973) findings. The positive adjectives convey a perception of one's self as capable, independent, and a frontrunner. Monge observes that these adjectives bear close relationship to those male-valued traits found by Rosenkrantz et al. (1968) in a study of sex-role stereotypes of college students. In the case of the data in this study, the positive adjectives reflect this same capable, independent, and frontrunner self-perception. The negative pole, on the other hand, clearly indicates dependence, insecurity, and inadequacy.

Factor III, Masculinity/Feminity, contained the adjectives hard, and rugged common with Monge's (1973) findings. This factor was named Masculinity/Feminity by Monge because it clearly distinguished male and female responses. Since this factor only contained one more adjective in Monge's findings (strong) and because it was a very stable factor across all concepts and groups in this study, the name Masculinity/Feminity was accepted for Factor III.

Factor IV, Value/Well-Being, was defined on one pole by the adjectives confident, strong, good, steady, nice, sharp, healthy, valuable, and happy. Several of these items connote strength or potency and, in general, are indicative of self-worthiness or value. Other items taken collectively are indicative of self-perceptions which

reflect a general, personal well-being. Persons responding to positive ends of these adjectives would see themselves as physiologically sound, self-confident, and possess high self-esteem. Negative responses would be indicative of persons perceiving themselves as physiologically ill, have low self-esteem, and be unsure of themselves.

Table E presents the verimax loadings for the 21 adjective pairs and other statistics of interest for this composite factor analysis.

TABLE E

VERIMAX FACTORS FROM HUMANISTIC EDUCATION AND LIBERAL ARTS REAL SELF COMPOSITE

Variable[a]	Factor Loadings[b]				Communalities
	I	II	III	IV	
19. Satisfied-*Dissatisfied*	.846				.78
16. Relaxed-*Nervous*	.733				.73
20. *Smart*-Dumb	.780				.76
18. *Friendly*-Unfriendly	.757			-.399	.79
21. Refreshed-*Tired*	.733			-.359	.73
13. *Kind*-Cruel	.652			-.396	.75
4. Leader-*Follower*		.738			.59
6. *Success*-Failure		.718			.64
17. *Stable*-Unstable	.355	.699			.70
15. Superior-*Inferior*		.614			.38
14. *Hard*-Soft			-.801		.65
8. Rugged-*Delicate*			-.637		.55
1. *Confident*-Unsure				-.777	.80
3. *Strong*-Weak				-.773	.78
2. Good-*Bad*				-.749	.71
5. Steady-*Shaky*	.338			-.745	.72
7. *Nice*-Awful				-.745	.64
9. *Sharp*-Dull	.340			-.726	.70
10. Healthy-*Sick*	.557			-.681	.79
12. Valuable-*Worthless*	.519			-.675	.78
11. *Happy*-Sad	.533			-.671	.78
% of variance	24.0	12.2	7.4	26.9	70.5

[a]Numbered in order administered; italicized pole was left most on instrument.

[b]Loadings less than .30 in magnitude omitted.

Analysis of Factor Scores

In order to obtain a statistic for each subject which represents his measurement on each of the four factors, the following procedure was employed. Each subject's rating on each scale was transformed into standard score form. This results in a vector of standard scores for each subject. This vector was then premultiplied by the matrix product $(B'B)^{-1}B'$, in which B was the 21 (Variables) x 4 (Factors) verimax pattern matrix (Harman, 1967, sec. 16.3). The result is four "factor scores" which represent the subject's measurement on each factor. Factor scores so derived are in standard score form, distributed with a mean of zero and variance of one, and the vectors are orthogonal.

The next step was to run a one-way analysis of covariance on the factor scores to determine posttest differences between these two groups. Results of this analysis are presented in Table F.

TABLE F

FACTOR	GROUP	PRETEST $\bar{X}$	POSTTEST $\bar{X}$	ADJUSTED CRITERION $\bar{X}$	DF	MEAN SQUARE	F
I ADJUSTMENT	HE	-.043	-.001	-.001	1	.164	.16 ns
	LA	-.023	.062	.061	170	1.014	
II ACHIEVEMENT/ LEADERSHIP	HE	-.086	-.096	-.075	1	.636	.76 ns
	LA	.089	.065	.047	170	.839	
III MASCULINE/ FEMININE	HE	.188	-.036	-.054	1	1.401	1.60 ns
	LA	.123	-.025	-.236	170	.878	
IV VALUE/ WELL-BEING	HE	-.104	-.285	-.260	1	2.210	3.62
	LA	.334	-.008	-.029	170	.611	

These results clearly indicate that for Factors I, II, and III there are no significant differences in these Real Self perceptions. Factor IV does not meet the classically accepted alpha of .05 level of significance. The probability of alpha in this case is less than .07. Since the .05 level is arbitrary and responsibility for accepting any level of significance is ultimately up to the individual, we accept this .07 level as significant. Given this, it appears that the students in the Liberal Arts group perceived themselves more positively in a state of general well-being and with higher self esteem than students in the Humanistic group.

Concept #2: Myself as I really want to be, most of the time (Ideal Self) Factor Similarity

Seven orthogonal factors were extracted for the Humanistic Education group and five for the Liberal Arts group. Coefficients of congruence were determined for these factors and are presented in Table G.

TABLE G

COEFFICIENT OF CONGRUENCE MATRIX FOR HE AND LA IDEAL SELF							
Factor for the Humanistic Education Group	1	2	3	4	5	6	7
Factor for the Liberal Arts Group 1	-.510*	.746*	-.036	-.476	.759*	-.462	.288
" 2	.469	-.356	-.119	.348	.371	.584*	-.611*
" 3	.553*	.097	.647*	-.262	.044	-.145	-.035
" 4	-.363	.282	.106	-.612*	.453	-.816	.446
" 5	-.117	.208	-.006	.006	.238	.112	-.146

*factor similarity, Tucker (1951)

Factors 1, 2, 3, 4, 5, 6, and 7 of the humanistic education group are congruent to Factors 1 & 3, 1, 3, 4, 1, 2 & 4, and 2 respectively. The fact that Factor 5 for the liberal arts group was not congruent to any other factor is not too surprising since it was the last factor to be extracted hence, its common variance is expected to be small.

Since congruency exists for all factors for the humanistic education group, the notion of factor similarity was accepted.

Pooled Verimax Analysis

Five orthogonal factors were extracted from the pooled data. The 21 adjective pairs were listed under the factors in which they loaded heaviest in order to name the factors. Table H presents the factors with the adjectives used to name them. The adjective pairs are listed in order of their loading, largest to smallest.

TABLE H

FACTORS FOR IDEAL SELF HE AND LA COMPOSITE

I. Adjustment	II. Achievement/Leadership
Smart-Dumb	Stable-Unstable
Friendly-Unfriendly	Confident-Unsure
Satisfied-Dissatisfied	Success-Failure
Valuable-Worthless	Superior-Inferior
Kind-Cruel	Strong-Weak
Sharp-Dull	Leader-Follower
Relaxed-Nervous	Steady-Shaky
III. Masculinity/Feminity	**IV. Value**
Rugged-Delicate	Good-Bad
Hard-Soft	Nice-Awful
	V. Well-Being
	Healthy-Sick
	Refreshed-Tired
	Happy-Sad

Inasmuch as there was considerable similarity to the factor structure for Real Self, it was agreed that the names for these factors would be the same as those for the concept Real Self. It is worthy to note that the factor Value/Well-Being splits into separate factors in the case of the Ideal Self. This is not an uncommon event and it does support the notion of naming Factor IV RS as Value/Well-Being, as opposed to naming it under one organizing descriptor.

Verimax loadings and other relevant statistics for these factors are presented in Table I.

TABLE I

VERIMAX FACTORS FOR HUMANISTIC EDUCATION AND LIBERAL ARTS IDEAL SELF COMPOSITE

Variable[a]	Factor Loadings[b]					Communalities
	I	II	III	IV	V	
20. *Smart*-Dumb	.796					.80
18. *Friendly*-Unfriendly	.778					.69
19. Satisfied-*Dissatisfied*	.640					.63
12. Valuable-*Worthless*	.629					.63
13. *Kind*-Cruel	.555					.45
9. *Sharp*-Dull	.489		.374	.452		.66
16. Relaxed-*Nervous*	.474	.411				.50
17. *Stable*-Unstable		.694				.56
1. *Confident*-Unsure		.671				.55
6. *Success*-Failure		.670				.62
15. Superior-*Inferior*		.658				.51
3. *Strong*-Weak		.627				.57
4. Leader-*Follower*		.506	.444			.46
5. Steady-*Shaky*	.356	.594				.60
8. Rugged-*Delicate*			.742			.57
14. *Hard*-Soft			.735	.346		.68
2. Good-*Bad*				.674		.63
7. *Nice*-Awful				.755		.69
10. Healthy-*Sick*					.731	.67
21. Refreshed-*Tired*	.430				.636	.63
11. *Happy*-Sad	.488				.510	.63
% of variance	17.4	16.2	8.5	9.0	9.4	60.5

[a]Numbered in order administered, italicized pole was left most on instrument
[b]Loadings less than .30 in magnitude omitted

Analysis of Factor Scores

The procedure used to obtain the factor scores was the same as that described in the previous section Analysis of Factor Scores on page 16.

One way analysis of covariance was used to determine posttest differences between these two groups. Results of this analysis are summarized in Table J.

TABLE J

ANALYSIS OF COVARIANCE SUMMARY FOR HE VS LA IDEAL SELF							
FACTOR	GROUP	PRETEST $\bar{X}$	POSTTEST $\bar{X}$	ADJUSTED CRITERION $\bar{X}$	DF	MEAN SQUARE	F
I ADJUSTMENT	HE LA	-.137 -.108	.243 .048	.245 .047	1 144	1.33 .87	1.53ns
II ACHIEVEMENT/ LEADERSHIP	HE LA	-.123 -.075	.230 .014	.249 .004	1 144	2.04 .55	3.73
III MASCULINITY/ FEMINITY	HE LA	.019 -.088	-.028 .093	-.075 .119	1 144	1.26 .71	1.78ns
IV VALUE	HE LA	.255 -.267	.316 -.055	.172 .026	1 144	.683 .602	1.13ns
V WELL-BEING	HE LA	.146 -.155	.126 .002	.028 .057	1 144	.028 .680	.04ns

These results clearly indicate no significant difference between the experimental and control group in terms of Ideal Self perceptions associated with Factors I, III, IV, and V. Factor II is significant at the .06 level. We consider this to be an acceptable level of type one error and accordingly accept this result as significant. In this case, the humanistic education group perceives their Ideal Self in a more positive view in terms of its capability, independence, and leadership.

ANALYSIS #2: Posttest Only Design

The following are results pertaining to the question: are there differences in self-perceptions of preservice teachers who have had at least one course in humanistic education and preservice teachers who have completed their preparation for teaching through student teaching but have had no courses in humanistic education.

Separate factor analyses were done for each group and each concept; in this case, Teaching Self (TS), Ideal Self (IS), and Real Self (RS). Six independent factor analytic runs were made. Congruency was determined for the factors within each concept, between each group. Pooled factor analysis was used to obtain factor scores to compare the groups for the factors where this procedure was valid.

Concept #1: Myself as a teacher (Teaching Self) Factor Similarity

Four orthogonal factors were extracted from the data for the Humanistic Education group and five from the Student Teacher Group. Coefficients of congruence were determined for these factors and are reported in Table K.

TABLE K

COEFFICIENT OF CONGRUENCE MATRIX FOR HE VS ST TEACHING SELF					
Factor for the Humanistic Education Group		1	2	3	4
Factor for the Student Teacher Group	1	.657*	-.429	.629*	.177
"	2	.422	-.399	.480	.126
"	3	-.424	.750*	-.271	.008
"	4	.010	.192	-.086	-.573*
"	5	-.305	.312	-.339	.260

*factor similarity, Tucker (1951)

Factors 1, 2, 3, and 4 of the humanistic education group are similar to student teacher Factors 1, 3, 1, and 4 respectively. Since every factor for the Humanistic Education group was similar to some factor for the Student Teacher group, these data were pooled for comparison analysis.

Pooled Verimax Analysis

Four orthogonal factors were extracted from the pooled data. The 21 adjective pairs were listed under the factors in which they loaded the heaviest in order to name the factors. Table L presents the factors with the adjectives used to name them. The adjective pairs are listed in the order of their loading, largest to smallest.

TABLE L

FACTORS FOR TEACHING SELF HE AND ST

I. Potency/Adjustment

Stable-Unstable
Good-Bad
Valuable-Worthless
Smart-Dumb
Steady-Shaky
Healthy-Sick
Superior-Inferior
Leader-Follower
Satisfied-Dissatisfied
Refreshed-Tired

III. Congeniality

Kind-Cruel
Friendly-Unfriendly
Nice-Awful

II. Adequacy

Success-Failure
Confident-Unsure
Happy-Sad
Strong-Weak
Sharp-Dull
Relaxed-Nervous

IV. Masculinity/Feminity

Rugged-Delicate
Hard-Soft

Factor I, Potency/Adjustment is partially described by tne positive adjectives good, valuable, smart, superior, leader, and healthy. Together these terms imply a sense of worth and strength. Stable, steady, satisfied, and refreshed are adjectives which describe personal adjustment. Taken collectively these adjectives describe a person who sees himself in balance with his environment and is able to do something about it. The addition of the last phrase to this description is significant because it implies a sense of power and is the primary reason for naming half of this factor potency.

Factor II, Adequacy, was described by the positive adjectives success, confident, happy, strong, sharp, and relaxed. These terms convey a perception of teaching self as capable and intelligent. According to Fuller (1970) adequacy is a major concern of persons

becoming teachers. It is very likely that personal concerns for adequacy would result in a factor of teaching self which reflects this concern. Considering this, and that, this factor suggests capability and intelligence the name adequacy was applied to this factor.

Factor III, Congeniality, was described by the positive adjectives kind, friendly, and nice. These terms convey a perception of one's teaching self as affectionate, loving, sympathetic, pleasant, and able to establish relationships with others on the basis of love or esteem. Persons with these characteristics may be described as congenial, hence, this factor is named congeniality.

Factor IV, Masculinity/Feminity was described by the adjectives hard and rugged. Since these terms have been used to describe masculinity/feminity and have consistently appeared in this study and in Monge's (1973), the name masculinity/feminity was retained for this factor.

Verimax loadings and other relevant statistics for these factors are given in Table M.

TABLE M

VERIMAX FACTORS FOR HE AND ST TEACHING SELF COMPOSITE

Variables[a]	Factor Loadings[b]				Communalities
	I	II	III	IV	
17. *Stable*-Unstable	.936				.89
2. Bad-*Good*	.930				.89
12. Worthless-*Valuable*	.923				.87
20. *Smart*-Dumb	.918				.85
5. Shaky-*Steady*	.917				.87
10. Sick-*Healthy*	.910				.87
15. Inferior-*Superior*	.901				.82
4. Follower-*Leader*	.887				.80
19. Dissatisfied-*Satisfied*	.881				.80
21 Tired-*Refreshed*	.765				.61
6. *Success*-Failure		-.800			.66
1. *Confident*-Unsure		-.747			.59
11. *Happy*-Sad		-.738			.59
3. *Strong*-Weak		-.736			.58
9. *Sharp*-Dull		-.702			.56
16. Nervous-*Relaxed*		-.676			.54
13. *Kind*-Cruel			.778		.70
18. *Friendly*-Unfriendly			.746		.62
7. *Nice*-Awful		.369	.707		.69
8. Delicate-*Rugged*				.754	.63
14. *Hard*-Soft				.716	.61
% of variance	39.0	17.1	9.5	6.0	71.60

[a]Numbered in order administered; italicized pole was left most on instruments
[b]Loading less than .30 in magnitude omitted

Analysis of Factor Scores

Factor scores were derived for each subject from the pooled data using the procedure outlined in the section Analysis of Factor Scores on page 16.

One way analysis of variance was performed with these factor scores to determine differences in Teaching Self perceptions between the experimental and control group. Results of this analysis are summarized in Table N.

TABLE N

ANALYSIS OF VARIANCE SUMMARY FOR TEACHING SELF, HE VS ST

FACTOR	GROUP	MEAN		DF	MEAN SQUARE	F-RATIO	P
I POTENCY/ ADJUSTMENT	HE ST	.65 .73	.37 .99	1 147	70.00 .54	130.28	.000001
II ADEQUACY	HE ST	-.064 .072	1.02 .99	1 147	.68 1.00	.68	.410
III CONGENIALITY	HE ST	-.068 .077	.97 1.05	1 147	.78 1.00	.78	.38
IV MASCULINITY/ FEMINITY	HE ST	-.09 .10	.97 1.04	1 147	1.405 1.00	1.4	.24

There is no significant difference between the experimental and control group in their perceptions of self as teacher for the factors adequacy, congeniality, and masculinity/feminity. The result for Factor I, Potency/ Adjustment, is very definitely significant. This indicates that the preservice teachers in the Humanistic Education group perceive their teaching self as better adjusted to its environment and more capable of having an effect on it.

Concept #2: Myself as I really would like to be, most of the time (Ideal Self)

Factor Similarity

Five orthogonal factors were extracted from both groups. Coefficients of congruence were determined and are reported in Table 0.

TABLE 0

COEFFICIENT OF CONGRUENCE MATRIX FOR HE VS ST IDEAL SELF						
Factor for the Humanistic Education Group		1	2	3	4	5
Factor for the Student Teacher Group	1	-.344	-.834*	-.033	-.488	-.043
"	2	-.314	-.725*	-.446	-.526*	-.435
"	3	-.204	.278	.510*	-.072	-.255
"	4	-.039	-.490	-.657*	-.299	.107
"	5	.238	.333	.005	.583*	-.234

*factor similarity, Tucker (1951)

Factors 1, 2, 3, 4, and 5 of the student teacher group are respectively congruent to Factors 2, 2 & 4, 3, 3, and 4 of the humanistic education group. Since congruency is established for every factor in the student teacher group the pooling procedure to permit comparison of these groups is justified.

Pooled Verimax Analysis

Five orthogonal factors were extracted from the pooled data. The previously described procedure was used to name the factors. Table P presents the factors with the ordered adjective pairs used to name them.

TABLE P

FACTORS FOR IDEAL SELF HE AND ST

I. Adjustment

Happy-Sad
Valuable-Worthless
Satisfied-Dissatisfied
Friendly-Unfriendly
Kind-Cruel
Refreshed-Tired
Healthy-Sick
Smart-Dumb
Steady-Shaky

III. Masculinity/Feminity

Rugged-Delicate
Hard-Soft

II. Achievement/Leadership

Confident-Unsure
Strong-Weak
Relaxed-Nervous
Stable-Unstable
Leader-Follower
Success-Failure

IV. Value

Good-Bad
Nice-Awful

V. Acuity/Excellence

Superior-Inferior
Sharp-Dull

Since Factors I, II, II, and IV are very similar in composition to Factors I, II, II, and IV for Ideal Self in the HE/LA composite, the names used to describe these factors are the same. Factor V, Acuity/Excellence, contains the positive adjectives superior and sharp. Persons responding to positive ends of these scales would see their Ideal Self as "a cut above the rest" and as a person with keenness of perception. In this instance we are interpreting the adjective superior to indicate excellence and the adjective sharp to connote acuity.

Verimax loadings and other relevant statistics for these factors are given in Table Q.

TABLE Q

VERIMAX FACTORS FOR HE AND ST IDEAL SELF COMPOSITE

Variables[a]	Factor Loadings[b]					Communalities
	I	II	III	IV	V	
11. *Happy*-Sad	.764					.72
12. Worthless-*Valuable*	.756					.73
19. Dissatisfied-*Satisfied*	.736	.308				.66
18. *Friendly*-Unfriendly	.724					.71
13. *Kind*-Cruel	.694					.56
21. Tired-*Refreshed*	.644	.423				.61
10. Sick-*Healthy*	.603	.355				.52
20. *Smart*-Dumb	.539					.69
5. Shaky-*Steady*	.458	.492			-.474	.63
1. *Confident*-Unsure		.728				.64
3. *Strong*-Weak		.701				.64
16. Nervous-*Relaxed*	.317	.564				.53
17. *Stable*-Unstable		.523				.62
4. Follower-*Leader*		.490	.354			.47
6. *Success*-Failure		.475		.518		.57
8. Delicate-*Rugged*			.754			.61
14. Hard-*Soft*			.624			.55
2. Bad-*Good*	.310			.760		.73
7. *Nice*-Awful	.310			.728		.67
15. Inferior-*Superior*					-.743	.62
9. *Sharp*-Dull					-.625	.60
% of variance	21.8	14.2	7.3	8.8	10.0	62.12

[a]Numbered in order administered; italicized pole was left most on instrument
[b]Loadings less than .30 in magnitude omitted

Analysis of Factor Scores

Factor scores were derived for each subject from the pooled data using the procedure outlined in the section Analysis of Factor Scores on page .

One way analysis of variance was performed with these factor scores to determine differences in Ideal Self perceptions between the experimental and control group. Results of this analysis are summarized in Table R.

TABLE R

ANALYSIS OF VARIANCE SUMMARY FOR IDEAL SELF HE VS ST

FACTOR	GROUP	MEAN		DF	MEAN SQUARE	F-RATIO	P
I ADJUSTMENT	HE ST	-.034 .038	1.10 .88	1 147	.19 1.01	.19	.67
II ACHIEVEMENT/ LEADERSHIP	HE ST	-.038 .04	1.02 .99	1 147	.24 1.01	.23	.63
III MASCULINITY/ FEMINITY	HE ST	-.02 .02	1.02 .99	1 147	.06 1.01	.06	.80
IV VALUE	HE ST	-.04 .04	1.14 .82	1 147	.20 1.01	.20	.65
V ACUITY/ EXCELLENCE	HE ST	-.02 .02	.91 1.10	1 147	.08 1.01	.08	.78

These results clearly indicate no significant difference between the experimental and control group's Ideal Self perceptions for the factors measured by this instrument.

Concept #3: Myself as I really am, most of the time (Real Self)

Factor Similarity

Four orthogonal factors were extracted for both groups. Coefficients of congruence were determined for these factors and are reported in Table S.

TABLE S

COEFFICIENT OF CONGRUENCE MATRIX FOR HE VS ST REAL SELF					
Factor for the Humanistic Education Group		1	2	3	4
Factor for the Student Teacher Group	1	.493*	.199	-.179	-.023
"	2	-.191	-.208	.218	-.278
"	3	-.327	.274	-.064	-.440
"	4	.048	-.254	-.023	-.539*

*factor similarity, Tucker (1951)

Since factor similarity exists for only two of the four factors, the data were not pooled for further analysis. Therefore, the question of differences in Real Self perceptions was not answered. Here again, as in Analysis #1, the intriguing question relates to the nature of this dissimilarity.

DISCUSSION

ANALYSIS #1 PRETEST POSTTEST CONTROL GROUP DESIGN

Results of the attempt to determine treatment effects for the experimental group (HE) point to a dissimilarity in factor structure. One source of this dissimilarity could be that subjects from three courses were combined into one group. The within group variability could be the result of subjects in one group making changes in self-perceptions in ways different than in the other courses, the net effect being factor dissimilarity. An investigation of each humanistic education course for individual treatment effects and factor similarity is currently being conducted.

Regarding differences in self-perceptions between students completing a humanistic education course and a random sample of students who have completed a liberal arts course, we find that for the concept Real Self, liberal arts students see themselves in a more positive state of well-being and having more self esteem.

The content of humanistic education courses is the self. Persons involved in self study are dealing with self-perceptions to a greater extent than persons in liberal arts courses where a subject matter is the content. It is conceivable then that the self-perceptions of students in humanistic education courses would vary while those of the liberal arts students would remain more intact. Since courses in humanistic education explore the self, here and now, (Real Self) and use the future as an idealized state toward which the Real Self is becoming, the environment and nature of activities in these courses permit safe self exploration. Consequently, it would

seem that an honest view of the self would emerge from these experiences. This position has been hypothesized by Combs (1969) and supported in McClain's (1970) findings. It is very possible that this honest view of Real Self would be characterized by less esteem and personal well-being. Conversely, persons not involved in self study may have a less accurate view of self and perhaps tend to merge their Real and Ideal Self perceptions. This raises a question regarding the validity of the existence of Real and Ideal Self perceptions as separate entities. This study was not designed to investigate similarities or differences in Real and Ideal Self perceptions, since this distinction of perceptions was assumed. The factor structure for Real and Ideal Self in this study indicates a reasonable similarity between these concepts, however this is not compelling evidence for similarity.

Considering Factors, II, III, IV for Real Self it is significant that students from the Humanistic Education group see their Real Self no differently in terms of adjustment, achievement, and leadership than do students from the Liberal Arts group. The significance is that perhaps persons involved in self-study (humanistic education courses) were, in their own view, still well-adjusted and capable even though their perception of self-esteem and well-being are less positive. Several important questions arise which must be answered before any position on this notion can be firmly accepted. These questions are:

(1) Is this indicative that persons involved in this kind of self-study (humanistic education courses) will clarify and accurately perceive only some facet of Real Self perception? i.e. Value/Well-Being?

(2) Are there other components of Real Self perceptions?

(3) Were other components of Real Self effected by the treatment?

(4) Is it characteristic that persons involved in this kind of self-study (humanistic education courses) tend to accurately perceive elements of Real Self which do not threaten their adjustment or capabilities?

Different results were observed for Ideal Self perceptions. Students in humanistic education courses perceived their Ideal Self more positively in terms of capability, intelligence, and leadership qualities than did students in the reference population.

In humanistic education courses the self-actualizing person is esteemed and provides the basis for a substantial portion of the course content. Activities in these courses are predicated on the belief that human potential is untapped and has never been fully achieved. They are therefore designed to arouse the students' perception of his potential and would logically effect the Ideal Self perceptions. Liberal arts courses, as previously stated, have subject matter for their primary content. Yet, the basic concept of the liberal arts suggests that the realization of human potential is a major goal. As in all SUNY institutions, our motto reads "Let each become all he is capable of being." Since it is impossible to say with certainty what place self-actualization has in liberal arts courses, it could be argued that Ideal Self perceptions of students in these courses would not be under investigation and therefore, remain relatively constant.

One could imply from these results for Ideal Self that liberal arts students may possess ideals of their potential which are less

positive than the ideals of potential for students who have had humanistic education courses. Since potential was not measured directly no firm position regarding potential can be stated. The implication is none-the-less valid and certainly should be explored.

The results of Real and Ideal self-perceptions when considered together seem to have a logical relationship. Our logic is as follows: While a clarification of Real Self perceptions may result in lower self-esteem and sense of personal well-being, Ideal Self is viewed more positively in terms of its capability, intelligence, and leadership. Therefore, it would seem that these Real Self perceptions are accurate and accepted, hence the individual can progress toward the esteemed model of self-actualization. This is consistent with the theoretical positions of Combs (1971), Rogers (1965), and Maslow (1970) that accurate self perceptions are a necessary prerequisite for self-actualization.

ANALYSIS #2 POSTTEST ONLY DESIGN

Students completing a course in humanistic education perceived their Teaching Self as better adjusted to its environment and more capable of doing something about it than preservice teachers completing student teaching.

Considering that the student teachers' environment is certainly much different than the environment of a student on campus, the observed difference in Teaching Self perception is very likely the result of this environmental difference and not the effect of a treatment. It could be posited that experiences in the experimental courses are accounting for a significant portion of this effect.

Yet, given the magnitude of the difference (F=130) and the extremes of environmental conditions for these groups, we feel that the environmental effects are overriding or at least confounded with the experimental effects.

This effect was noted for Factor I, Potency/Adjustment, of the concept Teaching Self. We observe two dimensions for this factor; (1) personal (potency) and (2) environmental (adjustment). This appears to parallel Getzels' (1958) model for the social system in which teachers operate. He hypothesizes organizational (Nomothetic) and personal (Idiographic) dimensions for the system. Moeller and Charters (1966) allude to these dimensions as variables in a study of teachers' sense of power and bureaucratization. Given the existence of both dimensions in this factor and that the major aspect of the personal component is potency, one possibility is to consider this factor an indicator of sense of power. If one made such a consideration, the following hypothesis could be stated from this finding:

> The perceived sense of power for teacher education students who have not student taught is greater than those who have completed student teaching.

Here again, this is an implication and the question of preservice teachers' sense of power would have to be directly assessed in order to test this hypothesis.

Fuller's (1970) model for the development of teacher education programs is based on the concerns teacher education students have as they progress through teacher training. According to this model, the second phase of concerns for teacher education students centers around the Self as Teacher and are as follows:

(1) Concern about the new situation and new expectations; and about others' rules and others' evaluations of their adequacy. They say, "Where do I stand?"

(2) Concern about their personal adequacy, about their ability to satisfy their own needs, to answer questions about content, to do what they must, especially to control the class. They say, "How adequate am I?"

(3) Concern about their relationships with pupils, with their own feelings about pupils and pupils' feelings about them. They say, "How do pupils feel about me? What are pupils like?" [p.22]

Three of the four factors for Teaching Self in this study seem to be reflections of these concerns. Factor I, Potency/Adjustment, relates to the concerns about the new situation and new expectations. Factor II, Adequacy, relates to the concerns reflected in the question, How adequate am I? Factor III, Congeniality, relates to the concern about their relationship with pupils. The significance of this relationship is twofold, (1) the indirect substantation of Fuller's model and (2) the implications for further investigations of the perceptions of self as teacher held by pre and inservice teachers.

No significant effects were observed for the factors of the concept Ideal Self. One very likely explanation for this result is based on the fact that these groups (HE and ST) are both part of a larger group -- preservice teachers. Both groups have had courses in educational psychology, human development, and three methods courses, all of which deal with human behavior. Given the impact of developmental and phenomenological psychologists on the study of human behavior and that most modern methods of teaching (open classroom) are predicated on the assumption that human development is

continuous, ongoing, and perhaps limitless, it is reasonable to suggest that the Ideal Self perceptions for these students would be positive and similar. Positive responses were reflected in the mean value for all 21 adjective pairs which was 5.46 on a scale of 7. The results reported in Table R are indicative of the similarity. Furthermore, that there was a difference in the Ideal Self perceptions between the Humanistic Education group and the Liberal Arts group indirectly supports this explanation.

Factor dissimilarity prevents any discussion of effects for the concept Real Self. Again, the origin of this dissimilarity is of considerable interest and is currently under investigation.

RECOMMENDATIONS

One purpose of any pilot study is to indicate directions for further investigation. This pilot is no exception, hence, this section will attempt to specify directions and refinements for future investigations.

Some intriguing questions emerged from the findings and were raised in the discussion. A summary of these questions follows:

(1) What is the nature of the factor dissimilarity found in Analysis 1 and 2?

(2) What is the nature of self-perception?
   (a) Do Real and Ideal Self differ?
   (b) What are the significant variables of self-perception?

(3) What are the long range effects of courses in humanistic education?
   (a) Will the perceptions of Self as Teacher, specifically for the Factor Potency/Adjustment, be effected when students who have had courses in humanistic education do their student teaching?
   (b) Does the sequence and nature of a teacher education program have an effect on teachers' sense of power?

(4) Are models of teacher education consistent with the self-perceptions persons involved in teacher education?

(5) Are the results of this study replicable?
Are the Ideal Self perceptions of students not involved in teacher education but are enrolled in a liberal arts curriculum such that they perceive their Ideal Self in less positive terms with regards to its capability, intelligence, and leadership than do persons involved in teacher education?

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